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The growing demand for food accessibility, due to rapidly growing population of the world, has raised the interest of macroalgae as a food source also in the Western world. However, this combined with increased food awareness trigger a concern that accumulated microplastics in the oceans might pollute the seaweed and influence food safety and thereby applicability. One of the most common types of seaweed in Denmark is bladder wrack, *Fucus vesiculosus* (FC), and this specimen is also popular for the use in e.g. pesto and flour in Denmark. This study investigated if fluorescent polystyrene (PS) microplastic particles (diameter: 20 µm) adsorb to the macroalga FC and if they can be washed off afterwards with filtered seawater. In laboratory studies, FC tips (approx. 6 cm, collected in The Sound, North of Copenhagen, Denmark) was exposed to microplastics (2.65 mg/L filtered seawater) under controlled conditions (rotary box, 1 rpm, 2 h; 50 mL flasks; quadruplicates with four tips in each). Upon exposure, microscopy investigations showed that PS microplastic particles adsorb to the surface of FC. A subsequent 1 hour rinsing period in clean filtered seawater did not fully remove all particles, but significantly decreased the number of adsorbed PS particles by 81-86% ($p<0.05$). Fewer particles adsorbed to the actual bladders compared to the rest of the surface of the apical parts. The results are compared and discussed with regard to the monitored plastic content of the Danish waters and the biology of the FC, and not least compared and discussed with the present cleaning methods of the food industry of macroalgae in Denmark.